Unlike a number of other health care professions practicing in nursing homes (NH), data specific to physicians is almost nonexistent. The only nationally representative study of physician practice in the NH was completed almost a decade ago and could not account for response bias owing to the non-random nature of the survey methodology employed. Nonetheless, only 1 in 5 physicians engaged in primary care noted involvement in NHs and spent an average of only 2 hours per week in the facility. No information was available in this study pertaining to physician-patient ratios in the NH or the mix of activities engaged in by physician providers.

Although NHs are required to provide staffing data on an ongoing basis through online survey and certification reporting (OSCAR), physician-specific data are suspect. Feng et al recently demonstrated the nongeneralizability of OSCAR-generated physician data when compared to information gleaned from an intensive survey of medical directors, directors of nurses, and administrators. In contrast, the nursing shortage in NHs has been confirmed by OSCAR and has provided the basis for new policy and program initiatives.

**WHY THE CONCERN?**

Some observers may question the need to focus on the physician workforce in general, let alone in the NH, believing that marketplace forces will eventually remedy any existing imbalances. Others, however, contend that physician shortages will impact negatively on quality, access to care, and ultimately cost and must, therefore, inform policy directly.

Specific to the NH, an extensive literature has already documented the relationship between nurse staffing levels and quality of care. If one believes in the synergy between physicians and nurses in the NH, then inadequate staffing, from both a qualitative and quantitative perspective, on either side of the equation will magnify the negative consequences.

Ultimately, all treatment decisions in long-term care (LTC) settings are operationalized through nursing. Timely and accurate assessment of patient needs, efficient communication with physicians, and the translation of physician orders into treatment at the bedside are all very much dependent on nursing availability and acumen. A decline in either the quantity or quality of nursing staff not only will impact directly on patient care but will further constrain the recruitment of physicians into long-term care settings where other “environmental” barriers (such as fear of litigation and regulatory pressures) already figure prominently. Recognizing the interdependence between physicians and nursing in LTC makes it critically important to address the workforce issues in both disciplines simultaneously. To consider one without the other ignores the essential role each plays in ensuring comprehensive quality care to frail older adults.

While there is limited evidence pertaining to the impact of physician practice on NH care, the benefits of comprehensive geriatric assessment and management have been well documented. Limited evidence suggests that closed medical staffing patterns may make a critical difference in care. Close medical staffs, for example, which are limited to a small group of physicians with a primary interest in NH care, are associated with higher intensity of care and physician involvement in teams. In contrast, open medical staffs, which presumably do not have the same level of commitment and do not become fully integrated into the culture of the nursing facility, impede interdisciplinary communication and treatment. Table 1 highlights theoretical linkages between physician care and relevant patient care outcomes.

**DEFINING THE ISSUES**

Although physicians are a critical piece of the NH care equation, defining this group is not straightforward. Unlike a well-defined group of specialists (ie, organ-based specialists such as cardiologists or site-specific specialists such as hospitalists), NH physicians are believed to span the full spectrum of primary care and specialties as noted earlier. No national or even regional information is available that accurately depicts the demographics of the average NH physician.

**GERIATIC SPECIALISTS**

Although physicians in long-term care settings encompass several specialties, geriatricians and geriatric psychiatrists arguably are the most noteworthy. These geriatric specialists generally occupy clinical and administrative leadership positions in LTC settings in addition to leading academic initiatives related to continuing education and clinical/services research in LTC. Similar to the situation in nursing, the evidence clearly points to a shortage of geriatric specialists that is sure to worsen in the future.

Formal certification in geriatrics, available to Board-certified family practitioners and internists, began in 1980. Similar certification for psychiatrists began in 1991. The practice pathway option for obtaining certification ended for geriatric medicine in 1994 and geriatric psychiatry in 1996. Now certification requires formal training in an accredited fellowship (there were 97 accredited programs in 2002 for geriatric
Table 1. Potential Linkages Between Physician Practice and Outcomes

<table>
<thead>
<tr>
<th>Physician Availability on Site</th>
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<tbody>
<tr>
<td>• Appreciate use of ancillary services</td>
</tr>
<tr>
<td>• Timely assessment of clinical problems</td>
</tr>
<tr>
<td>• Treatment of acute issues</td>
</tr>
<tr>
<td>• Interaction with care team/medical director</td>
</tr>
<tr>
<td>• Role model for staff</td>
</tr>
<tr>
<td>• Staff educator</td>
</tr>
<tr>
<td>• Medical record completion</td>
</tr>
<tr>
<td>• Integration into nursing home culture</td>
</tr>
<tr>
<td>• Active participation in facility committee work</td>
</tr>
<tr>
<td>• Active in quality improvement program</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Physician Time With Patient/Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Knowledge of key biopsychosocial issues</td>
</tr>
<tr>
<td>• Completion of advance directives</td>
</tr>
<tr>
<td>• Realistic family expectations</td>
</tr>
<tr>
<td>• Increase satisfaction with care</td>
</tr>
<tr>
<td>• Aggressiveness of care appropriately and consistently linked to patient/family wishes</td>
</tr>
</tbody>
</table>

Non-Geriatric Primary Care Providers

While the evidence of a shortage of geriatric specialists appears convincing, does the same also apply to non-geriatric primary care providers? The fact that comprehensive information about physician staffing is neither mandated nor routinely collected complicates the question of whether or not a physician shortage in NHs indeed exists. Some might argue that the national average of 2 hours per week of physician time providing NH care is, in and of itself, emblematic of a shortage, whether representing inadequate physician time in the NH despite adequate numbers of physicians or because fewer physicians are available overall. Herein lies the conundrum—there is currently no "gold standard" that defines optimum practice in the NH let alone other LTC settings. For better or worse, most physicians who devote a significant percentage of their time to NH care define optimum practice according to the volume of patients seen and revenue generated. If one were to calculate the theoretical number of patients that could be seen in a 40-hour work week, the totals would seem frighteningly high to many experts in the field. Based on visits every 60 days with 4 patients seen per hour, the results would equate to 28 patients per day, leaving 1 hour for break time, travel, and paperwork. Patient volume per week would total 140. This might, in fact, be a conservative estimate as it does not account for new admissions or acute and subacute care visits in the NH. If patients were seen on a 60-day schedule then the total physician practice would equate to 1120 residents. Factoring nurse practitioners and physician assistants into the practice obviously would change these numbers up or down according to the needs and mission of the physician practice. If this physician:patient ratio is not ideal, as many would suspect, how should one arrive at the theoretical norm?

To answer this question, the term “optimum” requires clarification. As noted in the previous example, optimum might be defined by some clinicians as maximum reimbursement potential. Others, hopefully the majority, define optimum care according to the time necessary to accomplish given tasks specific to NH care, many of which have been increasing in complexity commensurate with a sicker and more frail population. These patients typically engender more complex treatment regimens and care plans that require a close working relationship with the entire care team. Psychosocial considerations must also be factored into this equation. Increasing patient acuity and knowledge gaps of family members as to what NHs can and should provide increasingly result in un-realistic expectations and create the need for greater physician involvement both as educator and family mediator. While Table 2 outlines the components of “optimum” care, the time necessary to fulfill each of these elements is not yet known.

Recognizing the unique responsibilities of NH physicians and the time necessary to deliver optimum care, most observers believe that there remains a dearth of physicians committed to and competent in LTC practice. No study to date, however, has quantified a shortage in this context. Although nurse practitioners and physician assistants are playing an

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Table 2 outlines the components of “optimum” care, the time necessary to fulfill each of these elements is not yet known.

**Table 2.** "Optimum" Care Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Time Percentage</th>
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<tbody>
<tr>
<td>Physician involvement in patient care</td>
<td>40-50%</td>
</tr>
<tr>
<td>Communication with family members</td>
<td>20-25%</td>
</tr>
<tr>
<td>Education of family members</td>
<td>10-15%</td>
</tr>
<tr>
<td>Integration into the nursing home culture</td>
<td>5-10%</td>
</tr>
<tr>
<td>Participation in facility committee work</td>
<td>5-10%</td>
</tr>
<tr>
<td>Active role in quality improvement program</td>
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</tbody>
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...medicine and 62 programs in geriatric psychiatry). Geriatric certificates of added qualifications have declined from a high of 2406 in 1988 to 213 in 2001; for geriatric psychiatry they declined from 490 in 1991 to 83 in 2001. Application rates for recertification, required every 10 years, average only 42% in geriatric medicine. These numbers, when added to individuals retiring from geriatrics or leaving the specialty, portend a 34% reduction of certified geriatricians from 1998 to 2004 (9256 to 6137). These remain conservative estimates assuming a minimal presence in all 145 medical schools in the United States, not to mention the number of leadership positions within the LTC continuum. Similar calculations have not been made for geriatric psychiatry. However, the consensus is that the current and projected supply of geriatric psychiatrists falls far below need. With only 2600 certified geriatric psychiatrists and an output of 456 fellows over the years 1995 to 2001, the needs of the older population, at least as regards psychiatric consultation, will remain unmet. Not surprisingly, the integration of geriatrics into medical school curricula nationally has been constrained, in large part owing to the lack of a critical mass of geriatricians in each medical school (0.5% of medical school faculty identify themselves as geriatrics specialists). Only 5 of the 145 allopathic and osteopathic medical schools have a distinct department of geriatrics. Geriatrics is usually offered in the form of an elective and then often poorly subscribed. Although geriatrics remains a requirement for internal medicine and family practice residents, the intensity and breadth of these experiences are highly variable and most often of a very short duration. No other specialties, except for obstetrics/gynecology, require a geriatric experience during training. The paucity of geriatric specialists limits the availability of role models for trainees and ultimately the recruitment into the field. Interestingly, although compensation for geriatric services is relatively small given the extensive time spent with patients, geriatricians are among the most satisfied of all specialists.10
the establishment of a LTC health service corps under the auspices of the National Health Service Corps. This would complement suggestions by many observers to consider the creation of a skilled nursing facility specialist track akin to the current hospitalist movement.

THE IMPACT OF NURSE PRACTITIONERS AND PHYSICIAN ASSISTANTS ON THE PHYSICIAN WORKFORCE

Nurse practitioners (NP) and physician assistants (PA) are key members of the medical team in NHs. Akin to their physician colleagues, basic demographics for these providers is not available on a national level. Further, there are no statistics related to the specific types of services rendered and the volume of NH residents served. Research is desperately needed, not only to answer these questions but more importantly to more clearly define the role of the NP and PA vis-à-vis the physician. While payment methodologies often dictate the activities of a given provider, little is known regarding the optimum role of the physician, NP, or PA recognizing the unique skills and experience of each professional. The same, of course, might be said of NPs and PAs practicing in community outpatient settings and hospitals. Competencies will differ depending on the complexity of the situation and the individual’s unique talents.

FORGING A RESEARCH AGENDA

Research specific to physician practice must address a number of clearly interrelated issues. It is imperative that we first understand “who” is delivering care in NHs before asking the question, “What difference does it make?” This will involve deciphering not only basic demographics, such as physician specialty and experience, but also how medical staffs are organized and interrelationships between physicians (attendings and medical directors) with the full range of disciplines practicing in the NH including NPs and PAs. Once the “who” is answered, then questions pertaining to “what” the physician actually does will require attention. In addition to the traditional time motion studies, new technological advances such as bar code readers may make documentation of physician activities achievable. Finally, the relationship between physician practice and outcome will require scrutiny in order to inform new policy and program reform. The range of outcomes to be studied needs to be broad and include links not only to traditional quality improvement markers but also to other disciplines such as nursing morale, turnover, and commitment as well as resident and family satisfaction.

The NH physician workforce is key to improving care of our nation’s over 1.6 million NH residents. Physicians must take the lead in setting the agenda regarding much-needed research and related new program initiatives. The future of NH practice is literally at stake.

REFERENCE


Table 2. Components of Optimum Care

- Measurable quality outcomes
- Attendance at care meetings
- Ongoing communication with care team
- Periodic rounds with staff most knowledgeable of patient
- Fulfillment of regulatory mandates
- Patient counseling
- Family counseling
- Integration into medical staff activities
- Ongoing communication with medical director
- Adequate “face” time with patient
- Recognition and respect for advance directives

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increasingly important role in LTC practice, they are not viable substitutes for physicians.

ISSUES OF RECRUITMENT AND RETENTION

Recruitment and retention efforts will vary based on the specific type of physician targeted (ie, primary care with high volume practice versus medical director with primarily administrative responsibilities). As noted in the previous discussion, concerted efforts will need to be undertaken to ensure a competent and viable NH physician workforce. While enhanced reimbursement may affect recruitment and retention, changes in the work environment will be necessary to counter the common depiction of NHs as contentious, overregulated, inefficient, and dominated by poorly trained managers. The culture change movement with its emphasis on person-centered care may be one approach to effecting change, although the physician’s role remains somewhat ill defined.11 The increasing medical acuity of NH residents must be factored in whenever system changes are contemplated. Subacute care demands an intensity of physician involvement much different from that required for stable LTC residents and may demand a totally different “work” paradigm.

Several recommendations have been proffered to enhance recruitment of physicians into NHs with no single program, however, likely to have a major impact. While physician-specific programs focusing on loan forgiveness may be a powerful inducement for trainees, the current scope of such government guarantees will likely impact only a small number of providers. Recommendations to expand formal geriatric fellowship training to 2 years, although likely to increase the number of academically trained physicians and alleviate a critical shortage in this area, also will have little impact as regards increasing the number of primary care NH providers. Likewise, while efforts to expand Health Resources and Services Administration funding to increase the number of geriatric academic awards and geriatric interdisciplinary fellowships will expand the number of teachers and role models in LTC practice, the increased recruitment of committed physicians into NH practice will likely lag by several years. Consideration must be given to additional innovative programs such as the establishment of a LTC health service corps under
SPECIAL ARTICLES

Katz and Karuza

adults in the LTC setting? Are there, for example, specific
attitudes and problem-solving approaches that make a physician
particularly suited for the task? Do altruism and a sense of
“giving back to the community” play a role?

How do we identify and mentor those with the desired
characteristics in medical school or residency? Is it too late to
bring them into the LTC setting after they have established
practices that do not include LTC? Does exposure to LTC in
medical school or residency influence our recruiting efforts?
How and when should LTC be introduced into the curricu-

DISCUSSANT: LARRY LAWHORNE, MD, MICHIGAN GERIATRIC EDUCATION CENTER, MICHIGAN STATE UNIVERSITY

Drs Katz and Karuza have provided a good framework for
our tasks today. They contend that there is a shortage of
committed, competent physicians in LTC and that this short-
age will worsen in coming years. In addition, they propose
that a cohesive interdisciplinary team is a fundamental com-
ponent for the delivery of quality care in the long-term care
setting.

If they are correct, and I believe they are, approaches to
address these issues and the corresponding research agenda
can be posed as a series of quests to determine the following:

(1) the characteristics of the physicians we want to attend
residents in LTC,

(2) the best ways to recruit and retain attending physicians
with the desired characteristics,

(3) the explicit roles and responsibilities of the attending
physicians who are recruited,

(4) the appropriate performance measures for the attending
physicians who practice in the LTC setting,

(5) the strategies for helping attending physicians become
strong members of a cohesive interdisciplinary team, and

(6) the most effective techniques for identifying, training,
and mentoring attending physicians who have the potential
to become medical directors.

I will address each of these 6 areas briefly.

What are the professional and personal characteristics of
the attending physicians who will best serve the frail older
adults in the LTC setting? Are there, for example, specific
attitudes and problem-solving approaches that make a physician
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...
This presentation clearly outlines issues that must be addressed about physician workforce issues. It is surprising that we do not have better information about such pivotal questions as (1) what types of activities define optimal physician performance in long-term care? (2) What are the costs of implementing these activities and how do different practice models affect these costs? (3) What are the outcomes of optimal physician performance?

These 3 questions are being asked at the national level in discussions about NH staffing but the emphasis has been placed on nurse staffing. There has been little or no attention in these national efforts directed toward the physician workforce issues raised in the Katz and Karuza presentation. It is clear that the research, policy, and consumer advocacy agendas that are already focused on the relationship of NH staffing to quality must be expanded to include physicians. In addition, the most direct approach to answering the 3 questions listed above about both nurse and physician staffing is to use a prospective trial model.

This model will involve several stages, all of which are feasible to implement. First, one will have to identify care that can be defended as “optimal” for both nursing staff and physicians. Practice guidelines, the ACOVE project, and data from the quality of life literature could be used as a starting point to identify care processes that are known or thought to be related to better clinical and quality-of-life outcomes. These care processes could then be implemented on several NH floors by a dedicated interdisciplinary team that will minimally include a physician, registered nurses, and aides. The goal of this interdisciplinary team is to implement the care processes that can be defended as “optimal” for the purpose of determining the labor requirements to do so. For example, what physician time is required to implement all of the assessment recommendations in practice guidelines for urinary incontinence, pain, and falls. What are the nursing aide and licensed nurse’s time requirements to implement physician orders about these conditions and to provide the type of social support that residents need for a good life quality? How much time must physicians and licensed nurses spend in managing care and monitoring the outcomes of recommended treatments? In consideration of efficacy issues, this field test could also investigate some of the alternative workforce models that are purported to increase nurse or physician productivity. For example, the use of ward clerks to reduce paperwork demands or new computer technologies to make care documentation more accurate and efficient.

The identification of the time to provide optimal care under efficient conditions to residents with different characteristics could then be estimated in preparation for implementing a randomized controlled trial to evaluate the outcomes and costs of optimal care. In this last step, NH floors could be randomized to intervention and control groups and staffed at those levels (physicians + nurse staffing) thought necessary to provide optimal care under highly efficient conditions. Scientifically defensible protocols to measure improved care quality as well as the clinical and quality-of-life outcomes that result from this care could then be implemented by blinded staff.

This type of proactive evaluation to answer questions about staffing, quality, and costs is ambitious but will produce answers to critical staffing questions more quickly than less proactive health service methodologies that attempt to answer staffing questions with secondary data generated by providers.